

society for social responsibility in science

SSRS Newsletter

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TWO SCIENTISTS QUESTION VALUE OF SPACE AND MISSILE PROGRAMS

Two missile and computer experts threw a scientific conference into uproar March 20 by publicly questioning the value of America's entire missile and space research program, according to press association reports.

Dr. A. R. J. Grosch, who is identified as Manager of Space Programs for the International Business Machines Corporation, spoke from the floor of the conference, which was held at California Institute of Technology. He said (according to the *New York Times*):

"Our missile program is the swan song of a dying civilization. We don't need better missiles to destroy each other---the ones we have now will do the job adequately. And there isn't any point in zooming off into outer space. We could spend the money better solving problems here at home---taking care of our overcrowded, underfed millions. If we did that, we wouldn't need to find new worlds to colonize."

"We are planning to spend millions of dollars a year on new missiles and space probes," Dr. Grosch said. "And I ask why? Why must we continue to shovel these millions into companies that are interested primarily not in new scientific knowledge but in their 7 per cent profit? That 7 per cent alone would go a long way toward solving the social problems that create warfare and make space exploration and colonization a necessary. We are in a bad way, I'm afraid, when we try

to solve our problem by mass killing---or by paddling off to a bigger island in space."

According to the *San Francisco Chronicle*, Grosch's remarks were met with loud bursts of applause from the assembled scientists. Several others jumped to their feet and began talking at the same time and the meeting ended in noisy disorder, the *Chronicle* said.

Earlier, Dr. Louis Ridenour, Jr., whose present title is Assistant General Manager of Research and Development in the missile systems division of Lockheed Aircraft Corporation, had made a speech saying the missile program was following America's "traditional economy of waste."

The following day, the International Business Machines Corporation issued a statement deploring Dr. Grosch's outburst and making it clear that the scientist spoke only for himself and that I.B.M. supported the missile program fully. However, the company said there were no plans to dismiss Dr. Grosch.

Commenting on the whole affair, former SSRS President Victor Paschkis asked: "Does the fear for job security override in these people the drawing of the logical consequence of their sound reasoning, i.e. to personally stop supporting the program which they condemn? What can be done to support them, so that they may find the courage to live up to their convictions?"

MONTANA STATE TRAINS EXPERTS FOR CONSTRUCTIVE OVERSEAS WORK

A graduate study program in International Technical Cooperation is now being organized by Montana State College, according to an announcement issued by the college. Purpose is to train scientists and technical experts for overseas work in underdeveloped countries. The program is on an experimental basis and is financed by a Carnegie Corporation grant.

The College has set up an International Cooperation Center and is seeking applicants for Fellowships. Opportunity is provided for study and supervised field experience in cultural areas outside the United States. Assistance is given in placement with technical assistance projects of U.S., U.N., and other agencies.

Fellows are now being sought who have a bachelor's degree, are interested in international technical cooperation as a career, and who have background, interest and training in technical fields useful in overseas work.

A master's degree is offered in twenty-four different technical fields including Agricultural Economics, Animal Industry, Foods and Nutrition, Educational Administration, Chemical Engineering, Mechanical Engineering and many others. Fellowships cover complete maintenance and travel. People with master's degrees may work toward a Ph.D.

Describing the program, Director Harvey F. Baty said: "We are looking for recent graduates who have enough maturity and experience to be reasonably certain of their choice of life work. We want people with good minds evidenced by scholarly attainment. In addition, they must have a genuine respect for the worth of persons of all races and cultures, and a capacity for establishing harmonious working relationships with them. This we

This Newsletter is published by the Society for Social Responsibility in Science, an organization of scientists and engineers whose purpose, according to its constitution, is "to foster throughout the world a functioning cooperative tradition of personal moral responsibility for the consequences for humanity of professional activity, with emphasis on constructive alternatives to militarism;...to embody in this tradition the principle that the individual must abstain from destructive work and devote himself to constructive work, drawing the line between the two according to his own moral judgment;...to ascertain through open and free discussion the boundary between constructive and destructive work to serve as a guide for individual and group discussion and action..."

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SSRS President 1958-9:

Edward G. Ramberg
900 Woods Road
Southampton, Penna.

SSRS Secretary 1958-9:

John C. Schuder
2931 Carter Road
Trevose, Penna.

Newsletter Editor and Composer:

Truman Kirkpatrick
663 Rochdale Circle
Lombard, Ill.

Newsletter Circulation Manager:

Franklin Miller, Jr.
Gambier, Ohio

realize is a matter of personality and emotional maturity as well as of study and experience."

According to the prospectus, the first step in enrolling in this program is for the candidate to express his interest in the program by means of a letter addressed to

Dr. Harvey F. Baty, Director
International Cooperation Center
Montana State College
Bozeman, Montana

As most readers of this Newsletter know, the subject of technical service overseas as a constructive use of scientific skill has long been an interest of the Society for Social Responsibility in Science. However, we had not known of the Montana State activities until recently. If readers are familiar with other activities in this field which have not been reported in the Newsletter, they are urged to send this information to the Editor.

SMALL TOOLS

Following is the text of a report presented at the September 1958 Annual Meeting of the Society for Social Responsibility in Science by John Zahradnik.

The activities which I am covering were conducted by John Foster, Curtis Johnson and myself here in Amherst. We feel that one of the disadvantages of the way in which we have been handling our work is the lack of communication between us and other members. However, because of time limitations and secretarial help limitations, it has not been possible for us to be more communicative. I should like to report on activities in four categories.

A. As was approved by the Annual Meeting of the Society last September, the name of the Small Tools Project has been changed to the IRDS, the International Rural Development Service, with the qualifying phrase of an association of Agricultural Specialists working on problems in nominal agricultural mechanization.

B. We have thus far established contacts to represent us in India and in Japan. These people have been made familiar with the fundamental purposes of our effort and have agreed to supply us insofar as it is financially possible with small tools samples and to serve as our representative in their respective countries.

C. Our current projects include the following:

1. We have received all of the operational data which I accumulated while working with the Near East Foundation. This operational data has to do with the performance of both large and small farm equipment in a rather undeveloped arid area. We hope to summarize this data and hope that it can be published as an example of how these various types of equipment have performed under difficult conditions where operators had to be trained and knew nothing about farm machinery, and where repairs were very scarce and supplies not readily available.

2. We are presently investigating the possibility of shipping what is now a waste in this country to undeveloped areas, hoping that a use can be found for this material. I refer to the usually discarded baler twine in this country. If we can es-

tablish that this baler twine is of sufficient use to farmers in any of the various undeveloped areas of the world, then we shall investigate the possibilities of collecting it and shipping it and dealing with the related problem of perhaps making it into rope or nets.

3. We hope to get out some sort of a small publication on the use of the grain cradle. This publication again would be based on data which I accumulated while working in Iran. This grain cradle is one that can be fabricated locally almost in its entirety. We could use some help here from other SSRS members, particularly those familiar with the making of grain cradle blades. It would be of interest to us if there were some simple metal-working process which could be made available for the fabrication of grain cradle blades.

4. Another project which we are working on at the present time has to do with the development of a special grain drill for conditions which exist in certain areas in India where J. Foster has worked. We have an excellent contact in India who is a potential farm machinery manufacturer. At the present time, we are trying to establish the functional requirements for this grain drill. Another possible project which we might get is that of participating in the design of a new dairy barn at Hokkaido University in Sapporo, Japan.

D. This last section has to do with our needs in the IRDS. It would greatly facilitate our work if we had made available to us some nominal funds for secretarial help and possibly for dictating equipment. Another need which would help carry on the work is for funds which could be used for student labor, both in digging up material from the library and possibly in working on some Small Tool models later on. Of course, these funds would be of most use if we continue to carry on as we have this past year in a rather small way. If we could get a sizeable amount of money so that we could put one professional man full time on this work, then I am sure that much more could be accomplished.

I am sorry that I cannot be with you in September at the Annual Meeting. I send my best regards and ask the Society to continue being patient with us.

John Zahradnik

Associate Research Professor
Agricultural Engineering Department
University of Massachusetts
Amherst, Mass.

LETTERS

WEIZSACKER AND GERMAN ATOMIC PROGRAM

To the Editor of the Newsletter:

This is a comment on Jehle's review of "Brighter Than a Thousand Suns."

A recent statement by Carl Friedrich von Weizsacker will, I hope, clear up the seething controversy about the role of German nuclear scientists during the war. It appears in an introduction by Weizsacker to "Christians and the Prevention of War in an Atomic Age--A Theological Discussion," a Study Document released by the World Council of Churches. The passage of interest is reprinted in *The Friend* (London), January 16, 1959, p. 72 (italics mine):

"Trying to be a Christian, trying to behave in a way which I may, I should not say justify, but which I may uphold, reading the New Testament again and again, I cannot see how I personally could in any way take part in making or using atomic bombs. *This is not a thing that I have known for all times.* I was an atomic scientist during the war and at that time I was working on the problem of nuclear energy. It is true that our German group then came to know clearly that *we would not be able to make bombs; and that relieved our consciences without forcing the decision upon us.* After the war, for more than ten years, there was no question of working on bombs for a German who stayed in Germany. But when, a couple of years ago, I realized that I might be asked soon to make bombs, *I knew that now a decision was inevitable,* and I found myself unable to take part in such a work. Of course, that means that I am prepared to accept the consequences of my decision for my own person, for my family and for my nation, whatever these consequences may be."

This statement is in line with Goudsmit's conclusions in "Alsos." These were based in part on the recorded conversations of the German scientists interned in England at the time the bomb was dropped on Hiroshima. Jungk did not take cognizance of this material because he could not obtain access to the original recordings.

My conclusion is that German nuclear scientists came early to the realization that, in Jehle's words, "the technical possibility of development of a German atomic bomb during World War II was quite out of the question." Having made this decision, German scientists attempted to inform the Allies of the cessation of their own efforts.

They were saved, for a time, from having to make a *moral* decision as to whether or not to cooperate in the construction of nuclear weapons.

O. T. Benfey
Earlham College
Richmond, Indiana

STAND OF GERMAN SCIENTIFIC SOCIETIES

To the Editor of the Newsletter:

The declaration of the Union of German Physical Societies, reported in the October 1958 SSRS Newsletter, may have caused many a reader to wonder why corresponding American professional societies seem so very far from taking a similarly forthright stand.

To be sure, conditions are different. However, in at least one respect American and West German physicists face a similar situation; the governments in both countries have, up to now, been equally committed to an uncompromising reliance on military force and nuclear armament. It is thus of some interest to examine the background of the German declaration.

One of the best ways of doing this, for anyone familiar with the German language, is to examine the files of *Physikalische Blätter* (Physik Verlag, Mosbach, Baden), an independent journal fulfilling a function similar to that of *Physics Today* in America. This journal has given a running account of the nuclear armaments debate and has thus, without doubt, contributed materially to crystallizing opinion among physicists in Germany.

The first important official action was the declaration of the German physicists at the membership meeting of the Union of German Physical Societies in Wiesbaden on September 25, 1955:

"We physicists gathered at the meeting of the Union of German Physical Societies in Wiesbaden on September 25, 1955 have taken cognizance with deep satisfaction and full agreement of the resolution signed by Bertrand Russell and nine other leading scientists from all over the world¹ and of the Mainau Appeal² of 18 Nobel Prize recipients gathered there on atomic armament and atomic war. We repeat: By any use in war of the weapons feasible today, the earth can be contaminated with radioactivity to such an extent that whole peoples can be annihilated. In extreme danger no nation will deny itself the use of any weapon that scientific technology can produce. Hence all nations must come to the decision to voluntarily renounce force as a

final resort of policy. If they are not prepared to do this, they will cease to exist. The physicists, who place the results of their research at the service of mankind, feel in duty bound to warn emphatically against any misuse of these results."

The next important event, which has almost certainly had the greatest influence of any on the thinking and action of German physicists as well as on public policy, is the Göttingen Declaration, in which 18 leading West German physicists warned against nuclear armament and pledged themselves not to take part in any phase of it.³ It found a strong echo in both West and East Germany, as has been reported in earlier issues of this Newsletter.⁴

An article in the *Physikalische Blätter* by Jordan, attacking the Göttingen Declaration, was followed by five others, by Schimank, Fleischmann, Born, Kortum, and Kromphardt, in support of it.

Two further statements of interest are a telegram to the Federal Chancellor by 35 Professors and 45 Dozenten of the University of Heidelberg, and a declaration sent by the Science Faculty of the University of Frankfurt to the President of the Federal Republic. The first declares that it should be a keystone of German policy to prevent German soil from becoming the point of origin of nuclear weapons and to induce agreements for universal controlled disarmament. The Frankfurt Declaration states that the use of nuclear weapons would threaten the very existence of mankind, and hence that their production and testing, even for purposes of deterrence, was useless. It continues:

"We know that this insight does not suffice to avert the catastrophe. It can become effective only through the moral strength and the persistent effort of every one individually, particularly those in positions of responsibility."

One of Kromphardt's thoughtful articles stresses a point of view shared by most of us: Though resistance and noncooperation with what we believe is wrong is essential, it is not sufficient. Sooner or later a purely negative approach ends in defeat. What is needed is a constructive counterblow, a "moral atomic bomb", which wrests the initiative from the champions of peace through fear.

--Edward G. Ramberg

¹SSRS Newsletter No. 40, August 1955.

²SSRS Newsletter No. 42, October 1955.

³SSRS Newsletter No. 61, May 1957.

⁴SSRS Newsletter No. 68, December 1957.

LETTERS (Continued)

To the Editor of the Newsletter:

I have read with interest in Newsletter No. 77 of September, 1958, the letters that were exchanged between Dr. G. Hertz, a member of the SSRS Council, and its President, Dr. E. G. Ramberg, dealing with a suggestion by Dr. Hertz for a change of our Society's name. I wonder if some such names as "Society for Moral Responsibility in Science" or "Society for Peaceful Application (Pursuit?) of Science" might not be more appropriate to represent the objective of our Society.

In any case, it will be of interest to know the reaction of the SSRS members to this suggestion.

Priyadarajan Ray
50-1, Hindusthan Park
Ballygunge
Calcutta, India

To the Editor of the Newsletter:

May I say a word about the suggestion for changing the name of the organization? I like SSRS. Certainly let us adopt no more restricted name. Science is worldwide, and the social responsibility of the scientist is equally worldwide. We need a name which is broad enough to allow some variation of emphasis to meet differing conditions now, and also one that could hope to provide some flexibility for adapting to conditions of an unknown future. By no means should we restrict ourselves to one line of activity, however important. I am in favor of keeping the name Society for Social Responsibility in Science.

Ada M. Field
Route 3
Guilford College Branch
Greensboro, N.C.

EMPLOYMENT

The Occupation Division of the SSRS was created for the purpose of making it easier for scientists to act according to conscience when choosing their employment. If a man loses his job because of his attitude toward performing duties involving "destructive" work, or if he leaves a job because he is conscientiously unable to perform work he deems immoral, the SSRS Occupation Division may be able to help.

All correspondence regarding the printing of ads and replies to ads should be sent to the Occupation Division Chairman, M. Jane Oesterling, Woman's Medical College, Philadelphia 29, Penna. When a name is given in the ad for a direct reply, a copy of the correspondence should be sent to Jane Oesterling.

SITUATIONS WANTED

CHEMICAL ENGINEER, 29, (trained in Hungary) seeks position in chemical industry. Experience includes manufacture of fine organic chemicals and biochemical research on bacterial systems.

PHYSICAL CHEMIST (Ph.D. candidate, coordination compounds), broad organic/inorganic background, wishes non-military research or research/teaching position with opportunity to study toward theoretical physics Ph.D. Publications and 7 years college chemistry teaching experience. Can teach introductory calculus of finite differences and treatment of experimental data. East Coast preferred, willing to travel.

SITUATIONS OPEN

PHYSICIST with graduate training in nuclear physics needed for teaching in excellent liberal arts college. Good opportunities for part-time research. Ph.D. preferred. Write to Landrum Bolling, President, Earlham College, Richmond, Indiana.

SITUATIONS OPEN

CHAIRMAN, PHYSICS DEPARTMENT of liberal arts college interested in peacetime uses of nuclear energy. Industrial site for production of nuclear energy within 10 miles. An accredited, church-related college, many of whose graduates go on to doctorates in science. Write: Dean Daryl E. Williams, Doane College, Crete, Nebraska.

ELECTRO-MECHANICAL ENGINEER capable of independent work in development of medical instruments and organization of small-scale production; familiarity with physics and electronic fundamentals required. Salary commensurate with experience. Write: Biophysical Electronics, Inc., 400 Northern Boulevard, Great Neck, N.Y.

ELECTRONIC TECHNICIAN--needed by Department of Surgery of large Eastern university medical school. Salary to \$4000.

ENGINEER with Master's degree in mathematics needed for teaching position in Ghana. Write: H. Muensterman, Mission Board, 1505 Race St., Philadelphia 2, Pa.

MATHEMATICIAN for teaching post at Earlham College. Opportunity to help create imaginative curriculum. Ph.D. or near Ph.D. required. Write Howard Alexander, Department of Mathematics, Earlham College, Richmond, Indiana.

PHYSICIST--for full-time instructorship or assistant professorship at Wilmington College, Wilmington, Ohio. Ph.D. or near Ph.D. preferred. Address W. Brooke Morgan, Jr., Acting President.

SENIOR TECHNICIAN OR JUNIOR ENGINEER with minimum 3 years experience, to assume responsibility for design and construction of medical electronic equipment. Salary commensurate with experience.

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